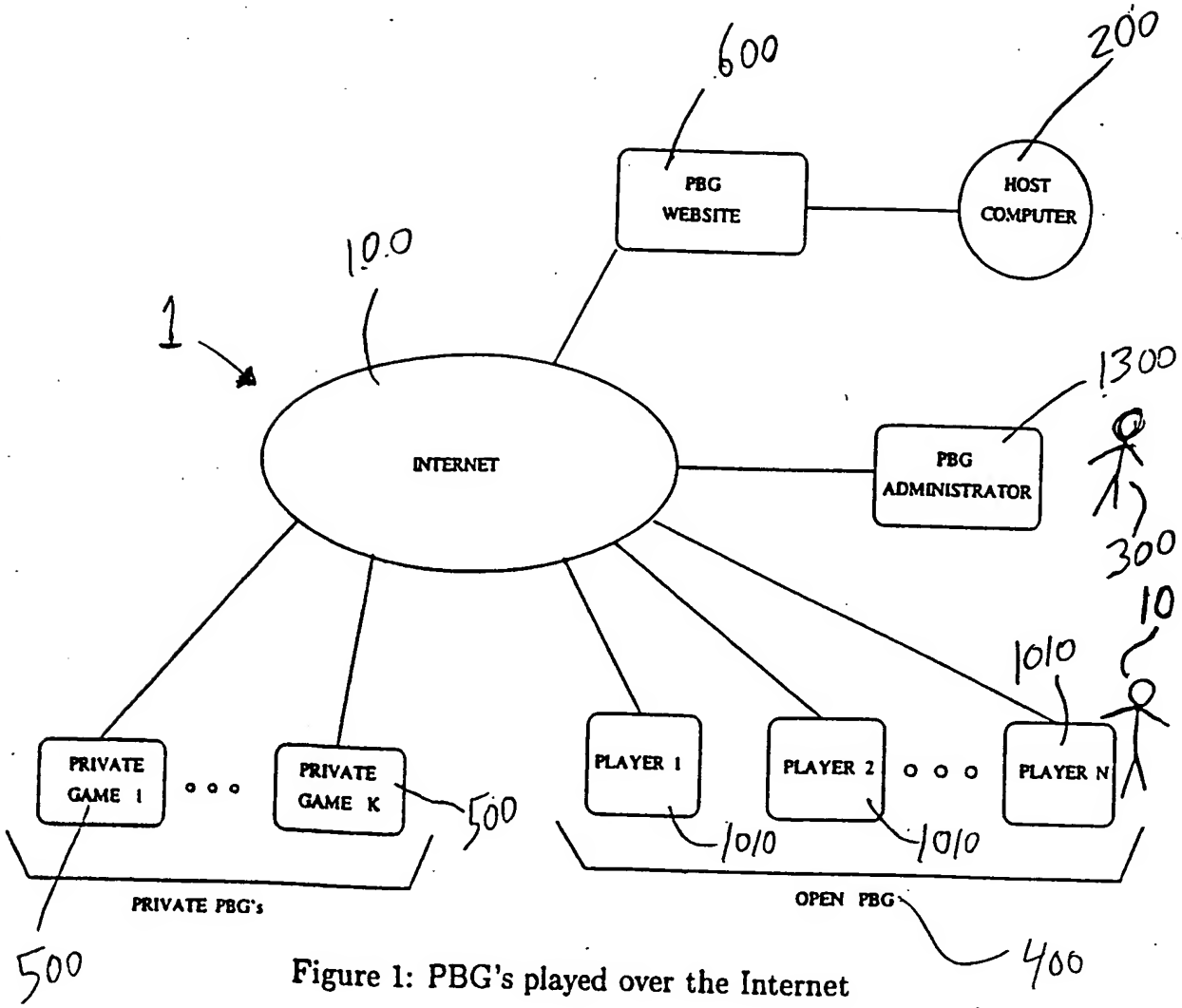

Figure 1: PBG's played over the Internet

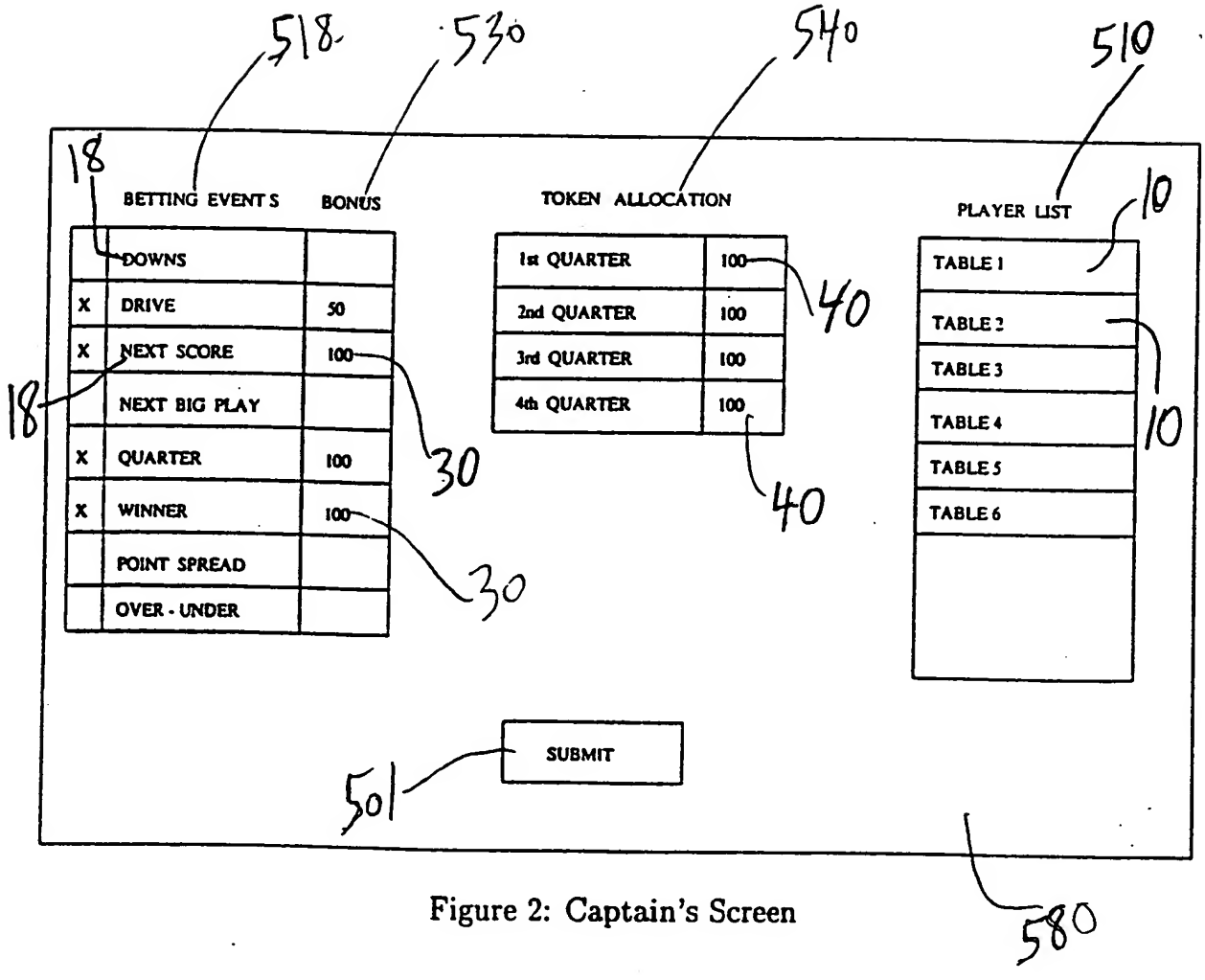

Figure 2: Captain's Screen

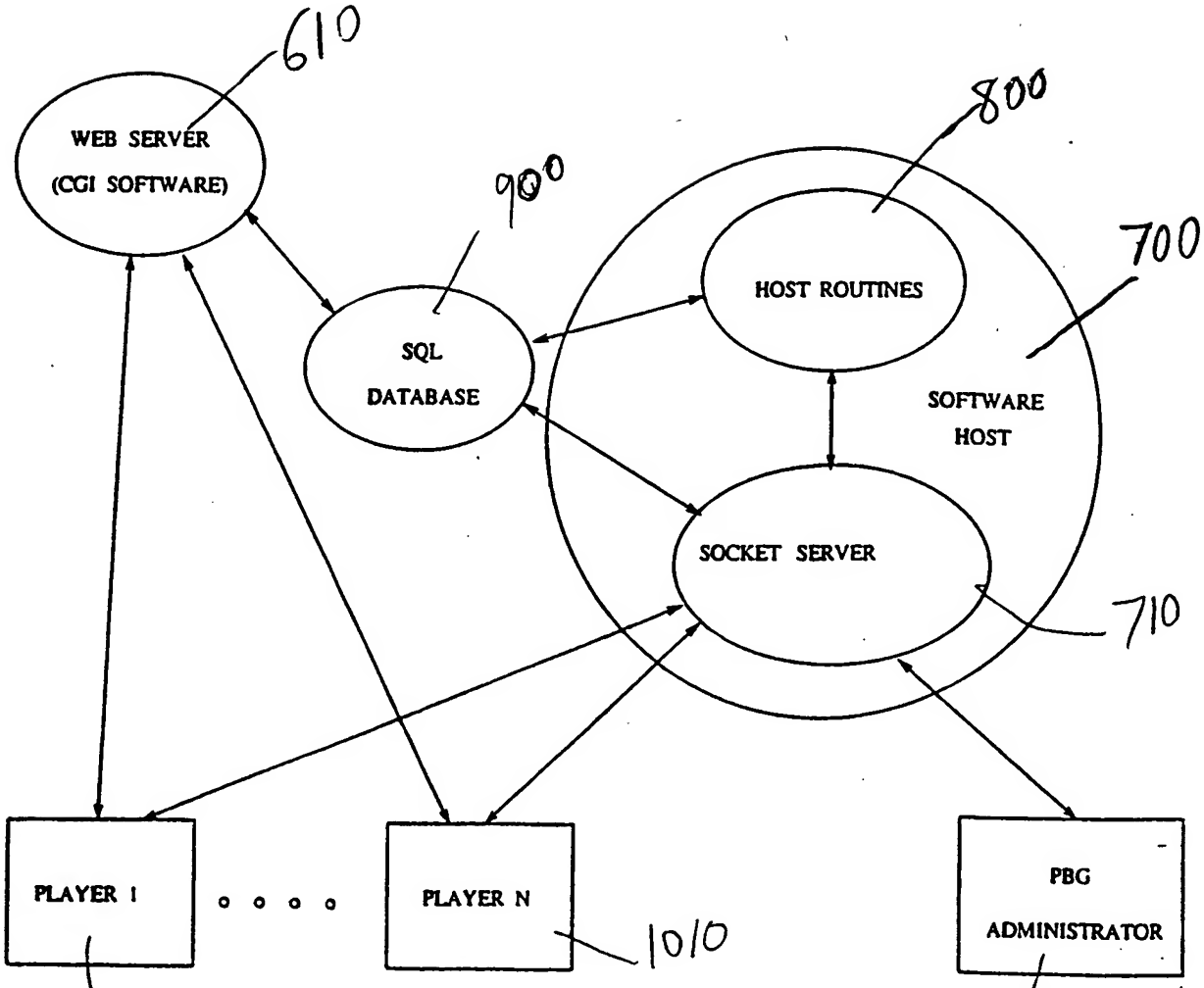

Figure 3: Basic PBG Web Site Software Architecture

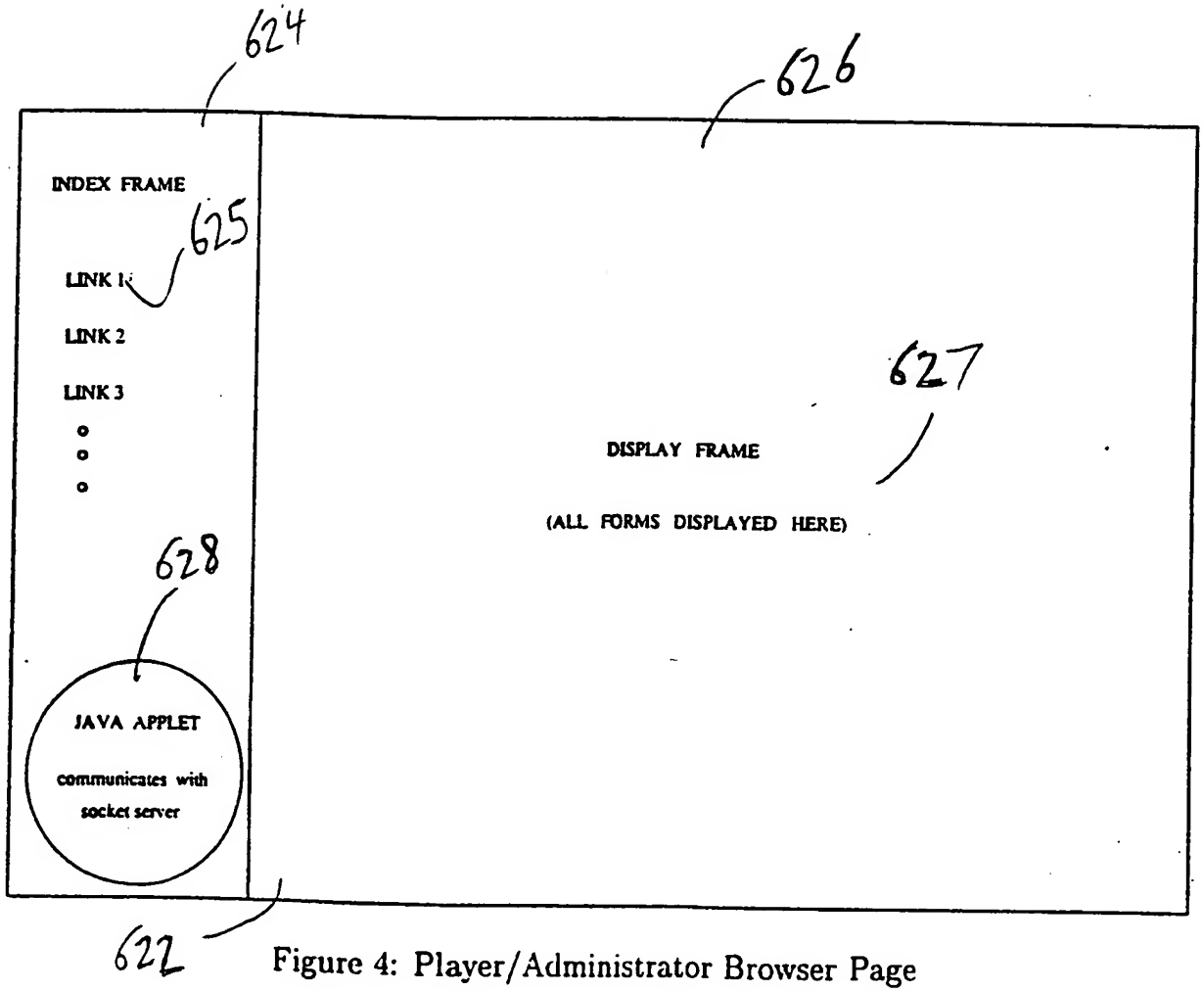

Figure 4: Player/Administrator Browser Page

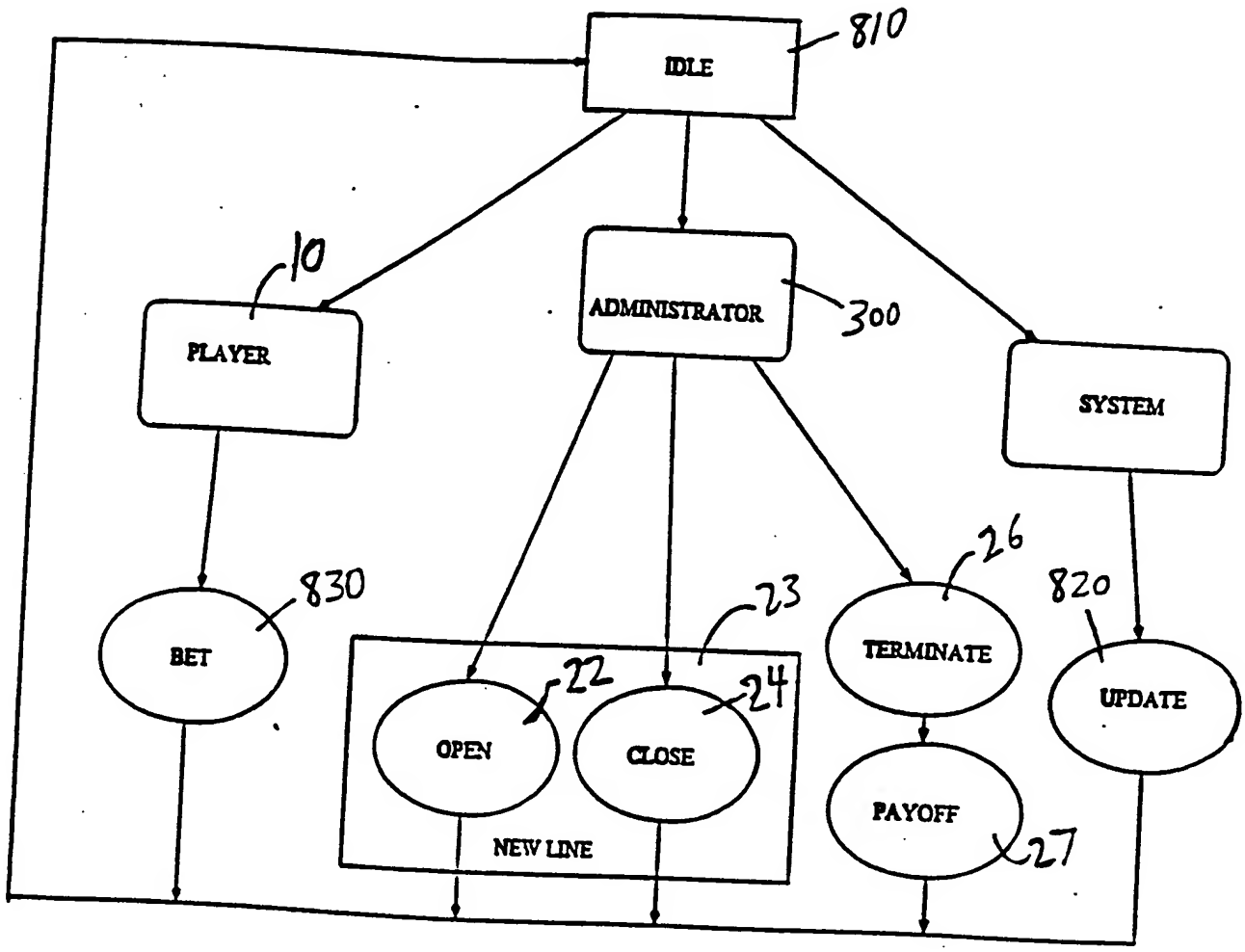
IDLE
810
10
PLAYER
ADMINISTRATOR
300
SYSTEM
BET
830
23
26
820
TERMINATE
UPDATE
22
24
OPEN
CLOSE
NEW LINE
PAYOFF
27

Fig. 5

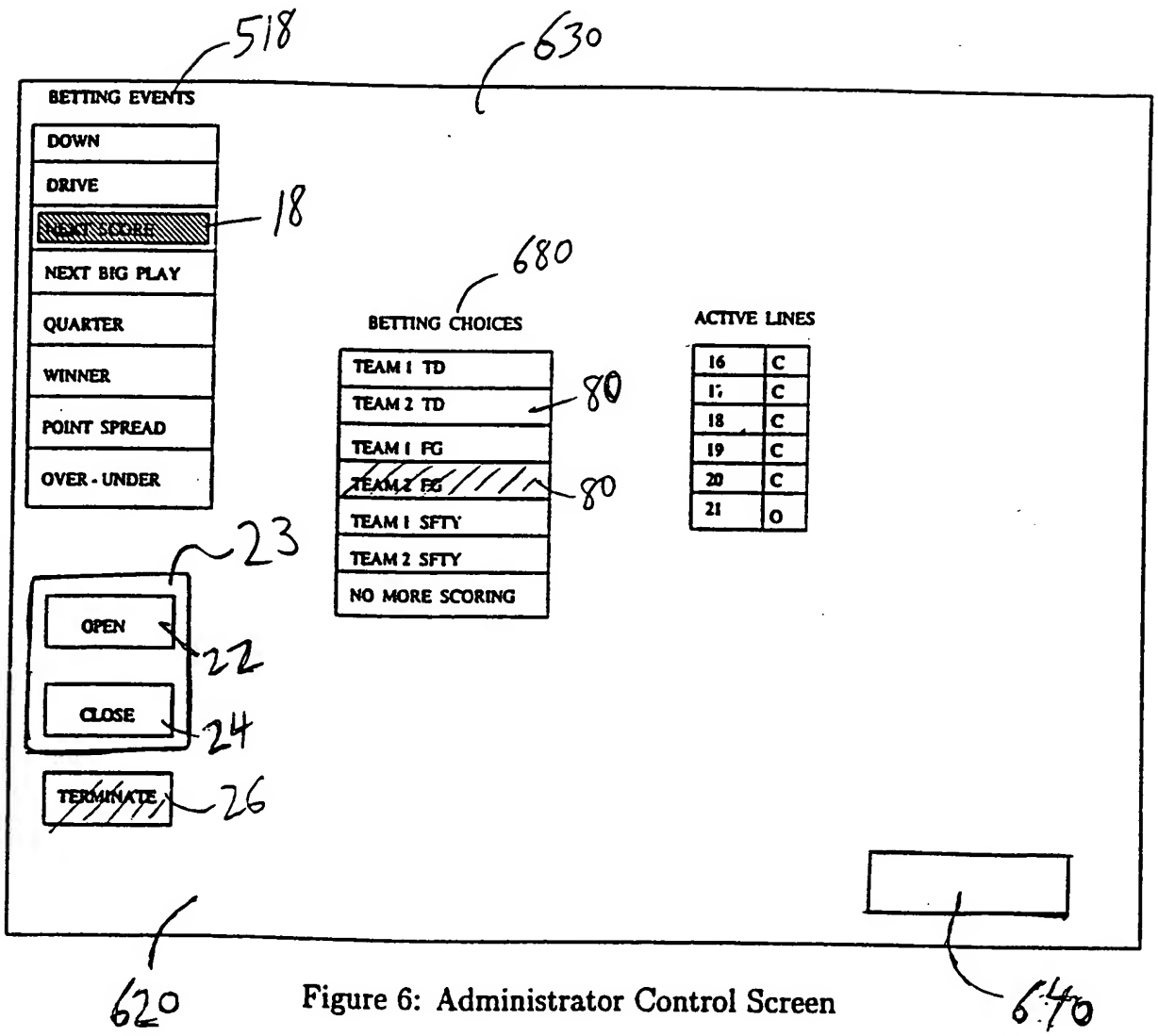

Figure 6: Administrator Control Screen

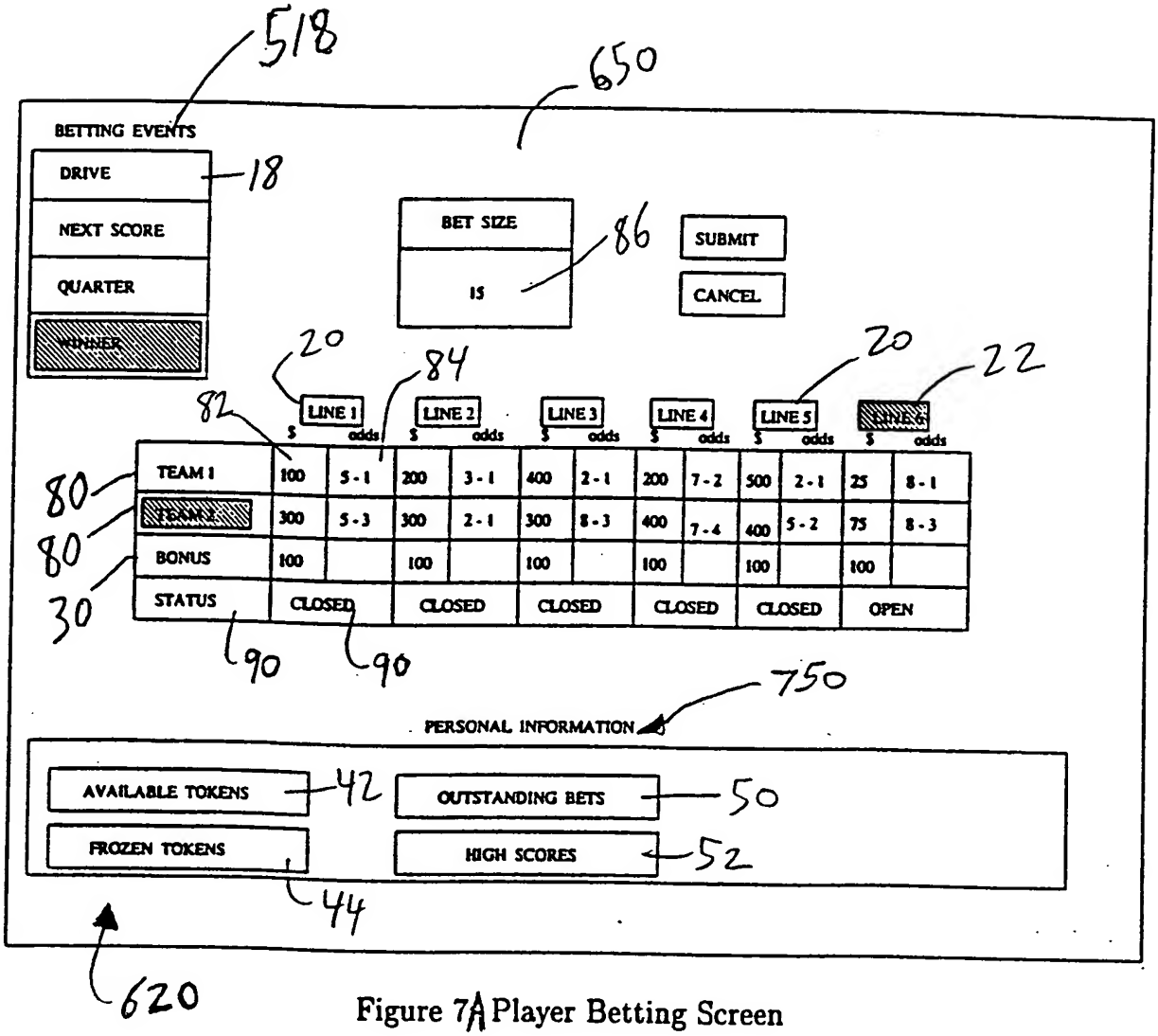

Figure 7A Player Betting Screen

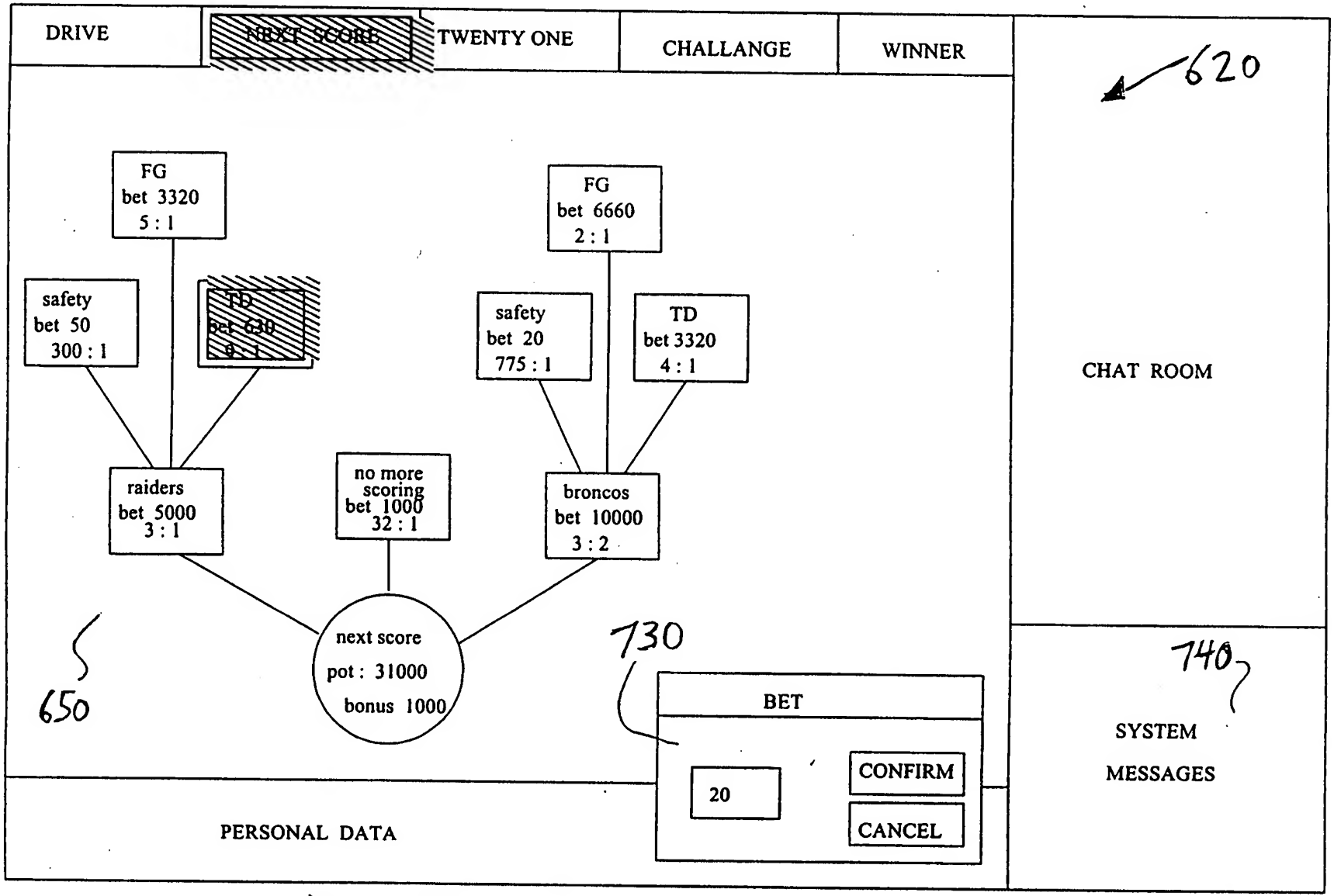
DRIVE
NEXT SCORE
TWENTY ONE
CHALLANGE
WINNER
620
FG
bet 3320
5 : 1
safety
bet 50
300 : 1
TD
bet 630
9 : 1
FG
bet 6660
2 : 1
safety
bet 20
775 : 1
TD
bet 3320
4 : 1
CHAT ROOM
raiders
bet 5000
3 : 1
no more
scoring
bet 1000
32 : 1
broncos
bet 10000
3 : 2
650
next score
pot : 31000
bonus 1000
730
BET
20
CONFIRM
CANCEL
740
SYSTEM
MESSAGES
PERSONAL DATA

Fig. 7B

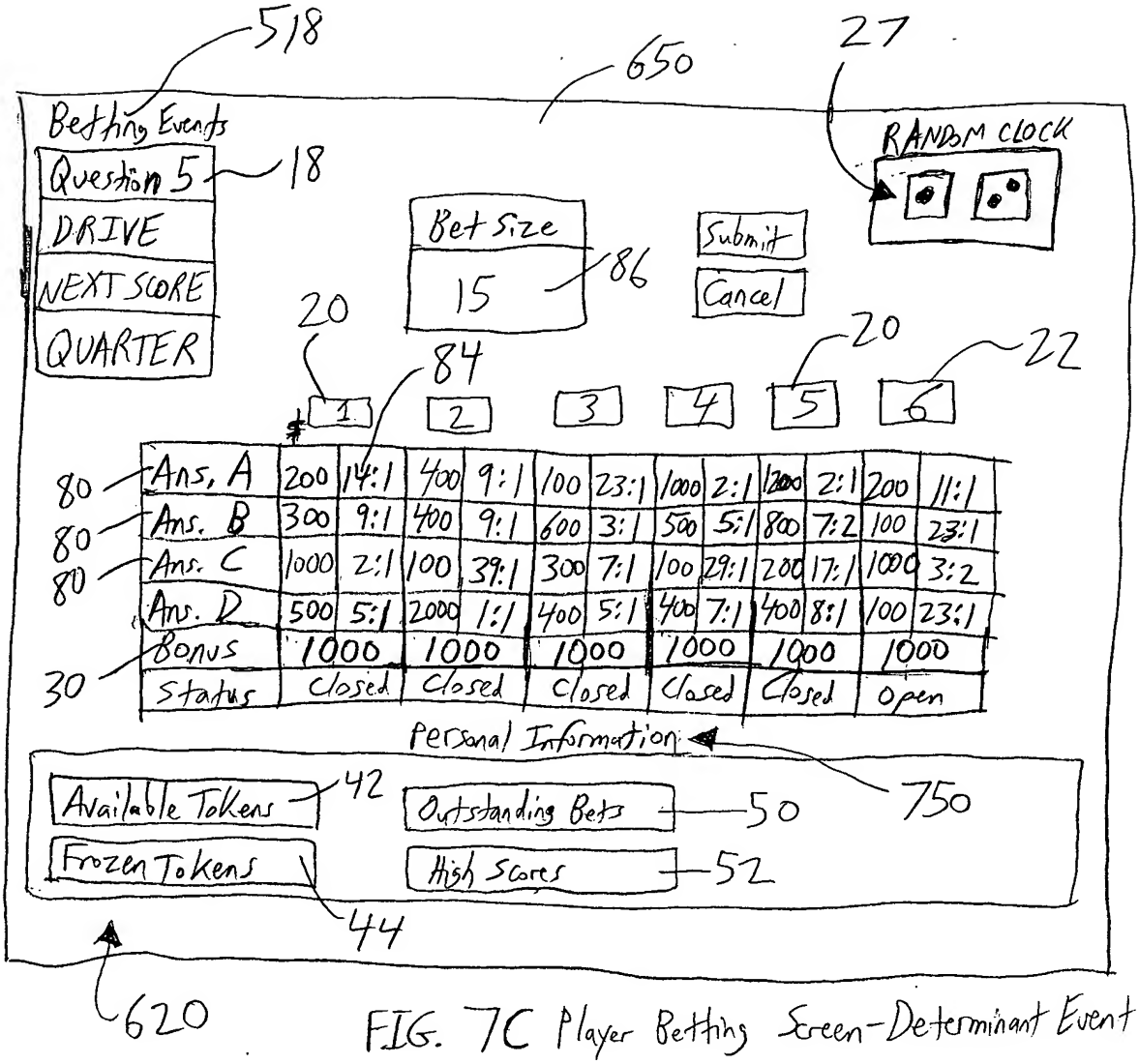

FIG. 7C Player Betting Screen-Determinant Event

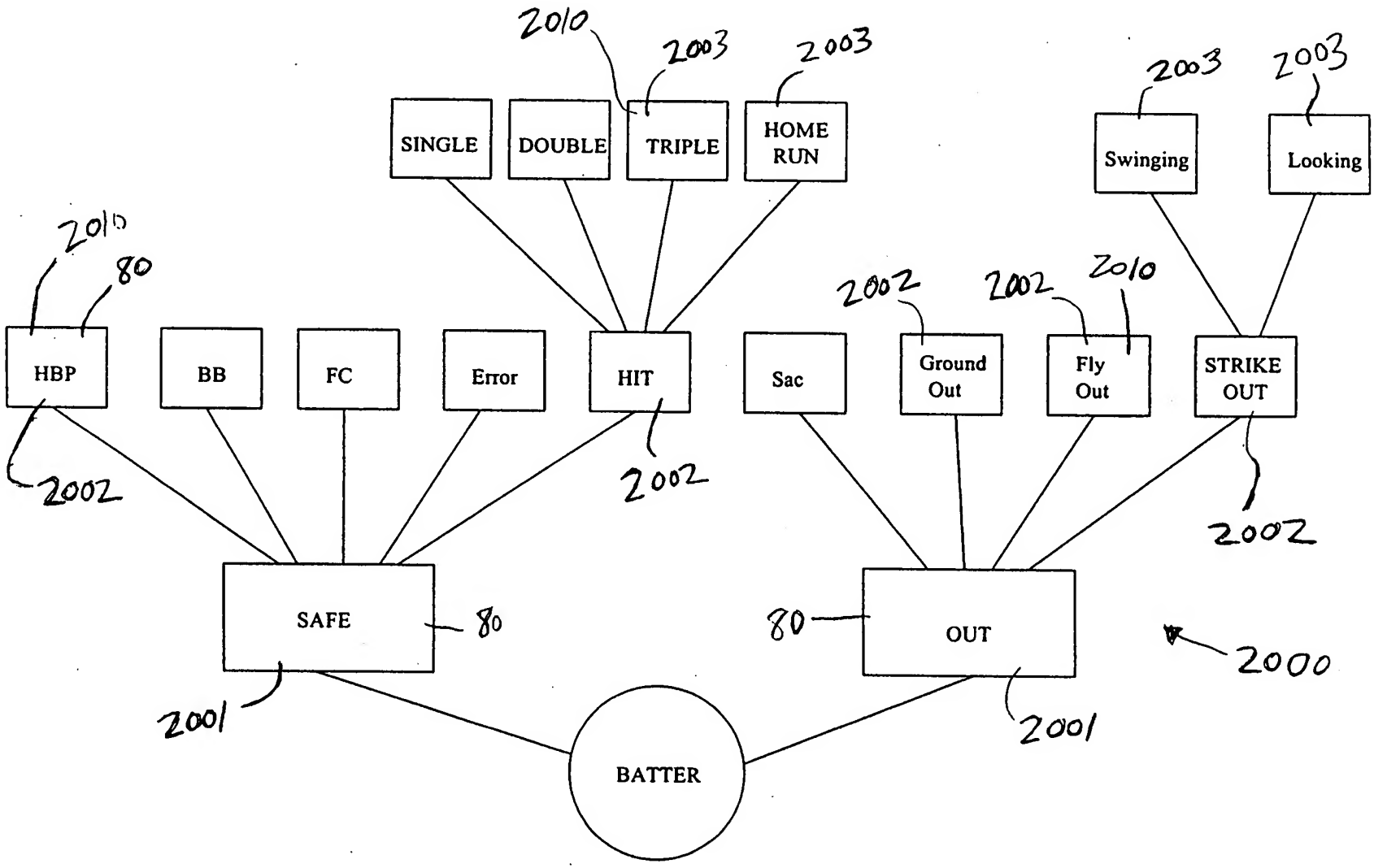
2010
2003
2003
2003
2003
SINGLE
DOUBLE
TRIPLE
HOME RUN
Swinging
Looking
2010
80
2002
2002
2010
HBP
BB
FC
Error
HIT
Sac
Ground Out
Fly Out
STRIKE OUT
2002
2002
2002
SAFE
80
80
OUT
2000
2001
2001
BATTER

Fig. 8A

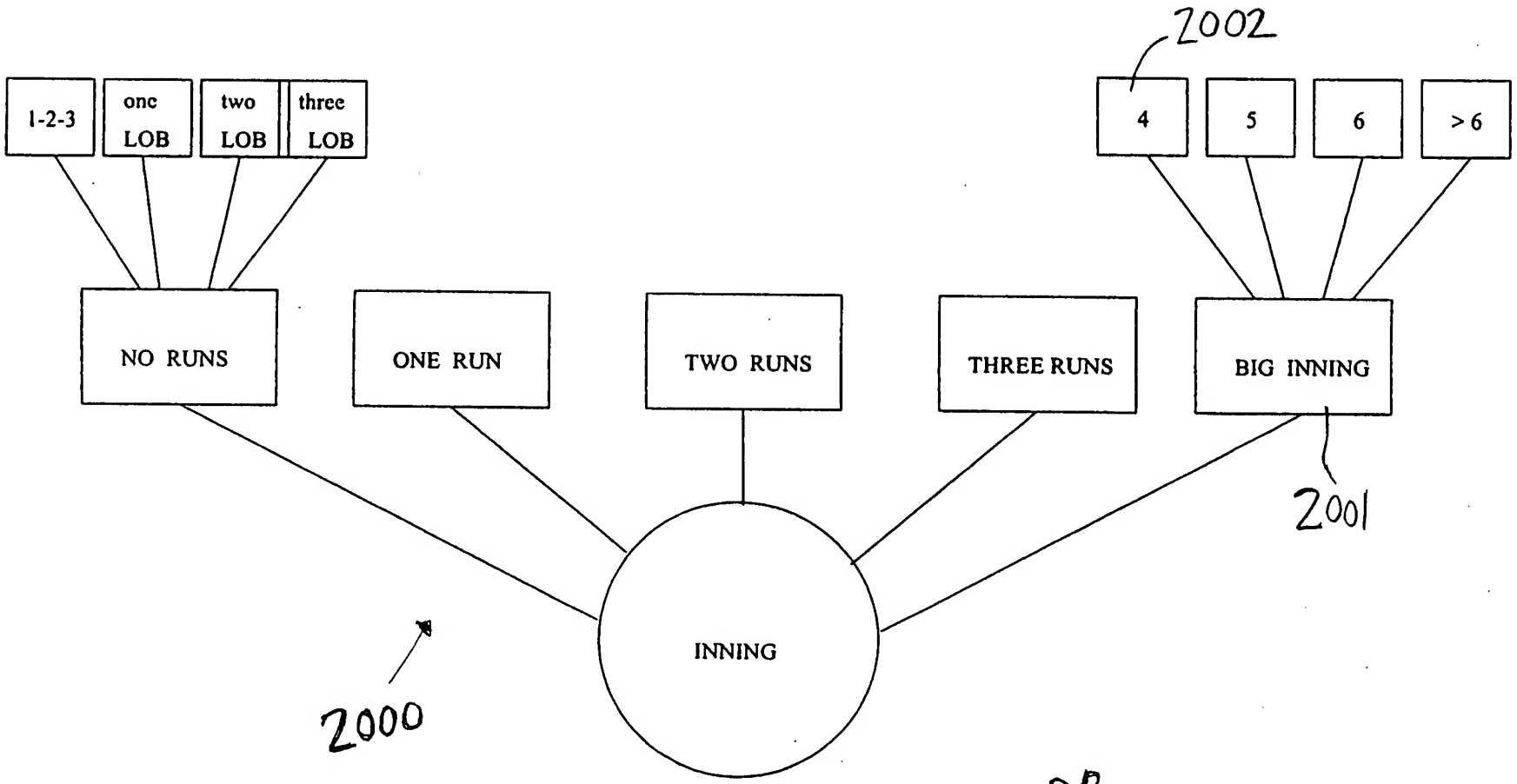
2002
1-2-3
one LOB
two LOB
three LOB
4
5
6
>6
NO RUNS
ONE RUN
TWO RUNS
THREE RUNS
BIG INNING
2001
INNING
2000

Fig. 8B

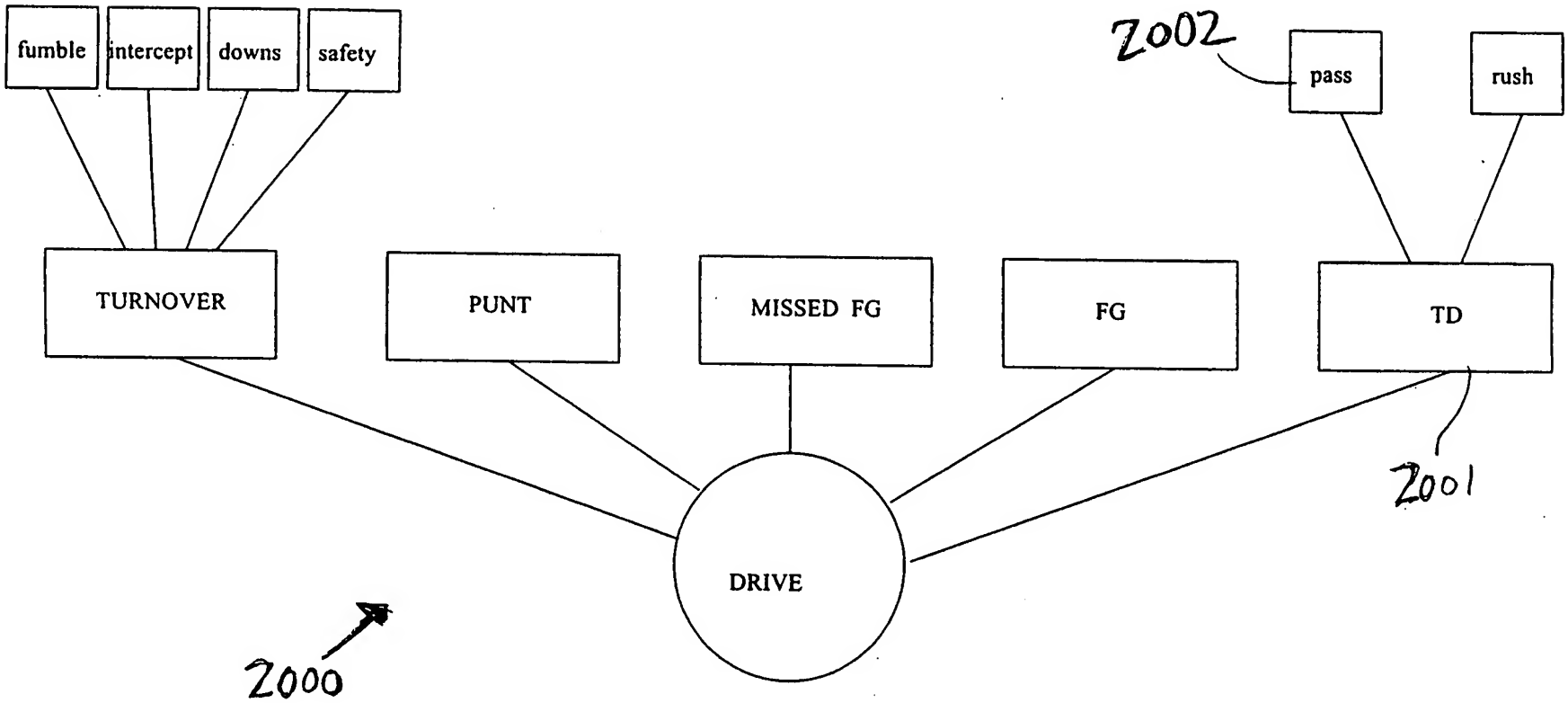
fumble
intercept
downs
safety
TURNOVER
PUNT
MISSED FG
FG
pass
rush
TD
DRIVE
2002
2001
2000

Fig. 8C

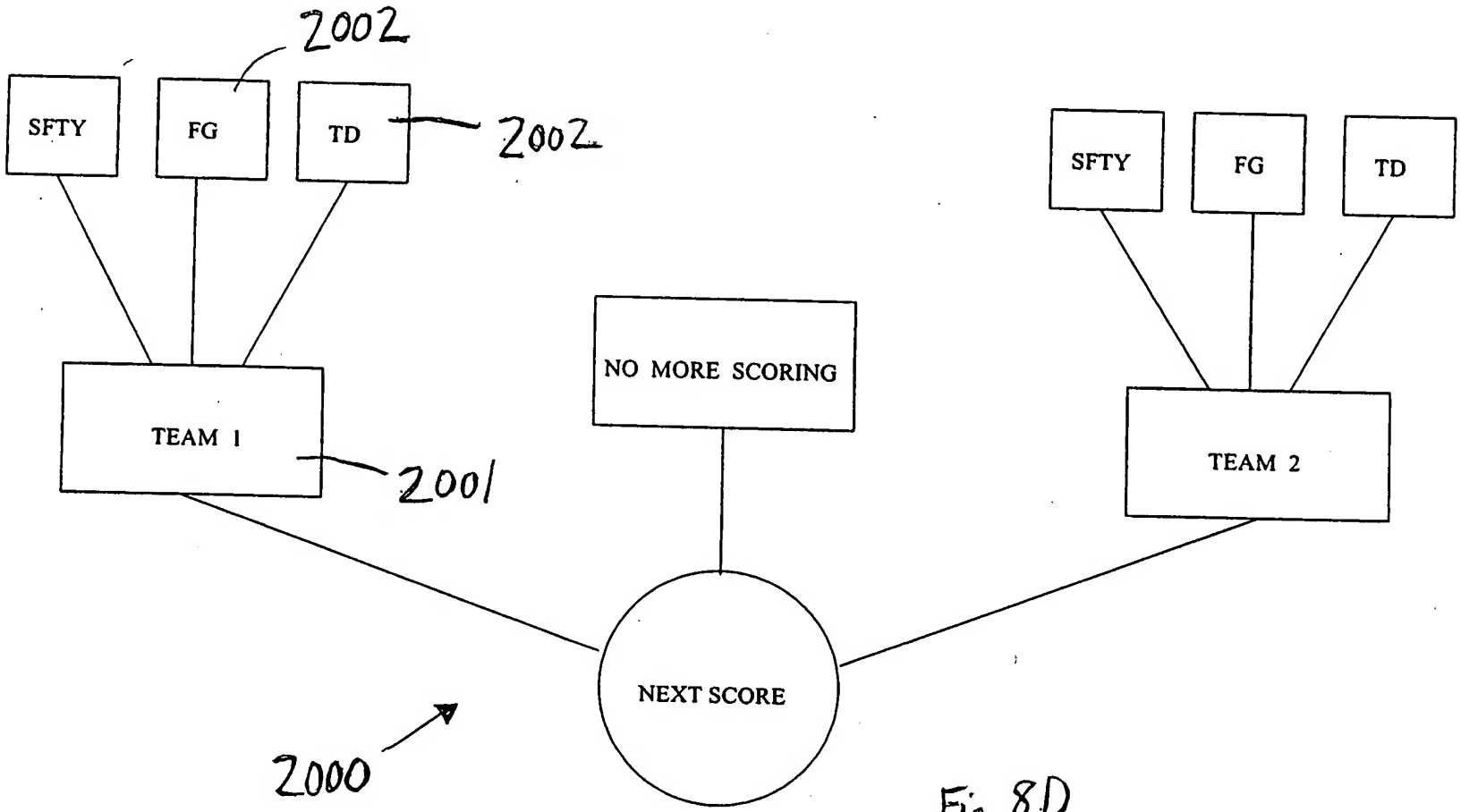
2002
SFTY
FG
TD
2002
TEAM 1
2001
NO MORE SCORING
SFTY
FG
TD
TEAM 2
NEXT SCORE
2000

Fig. 8D

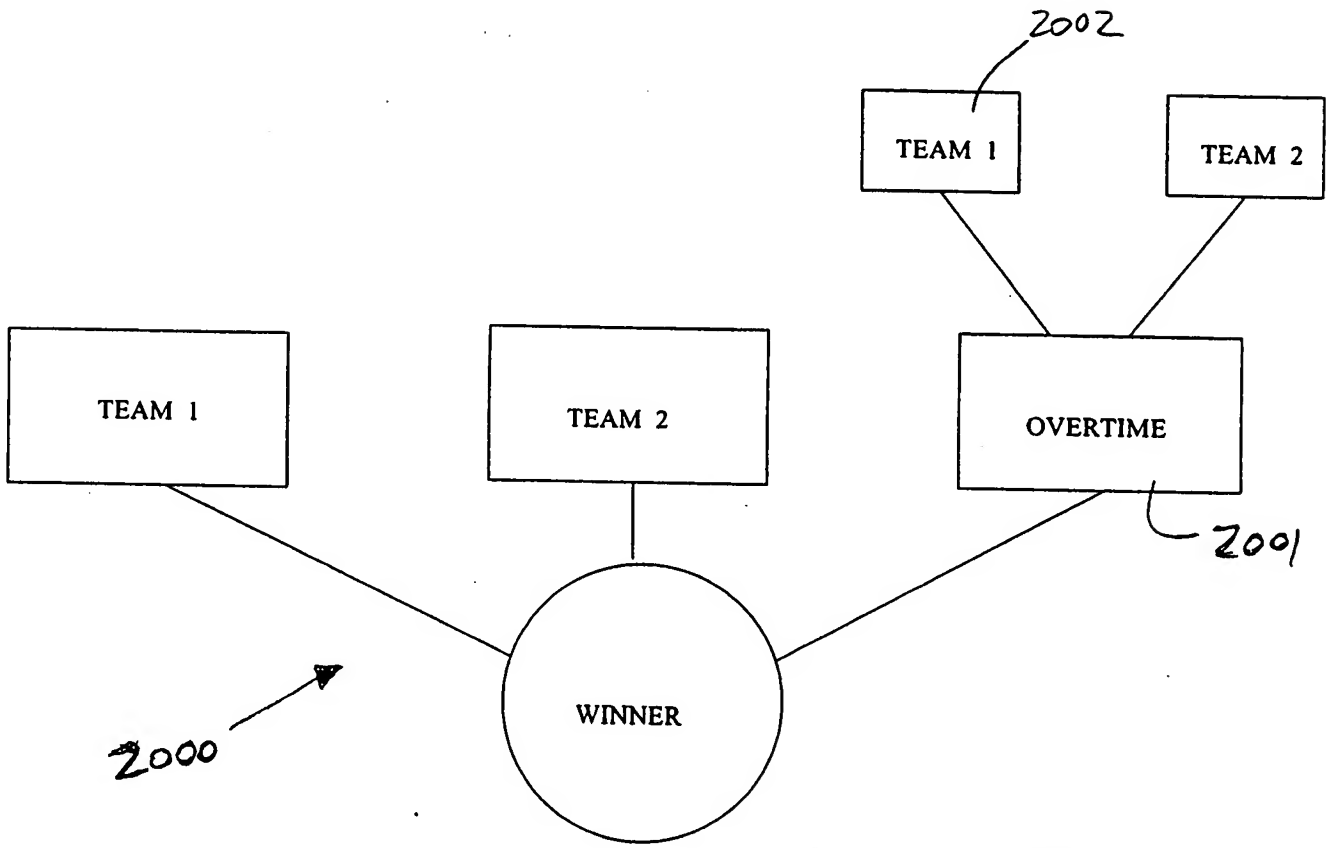

Fig. 8E

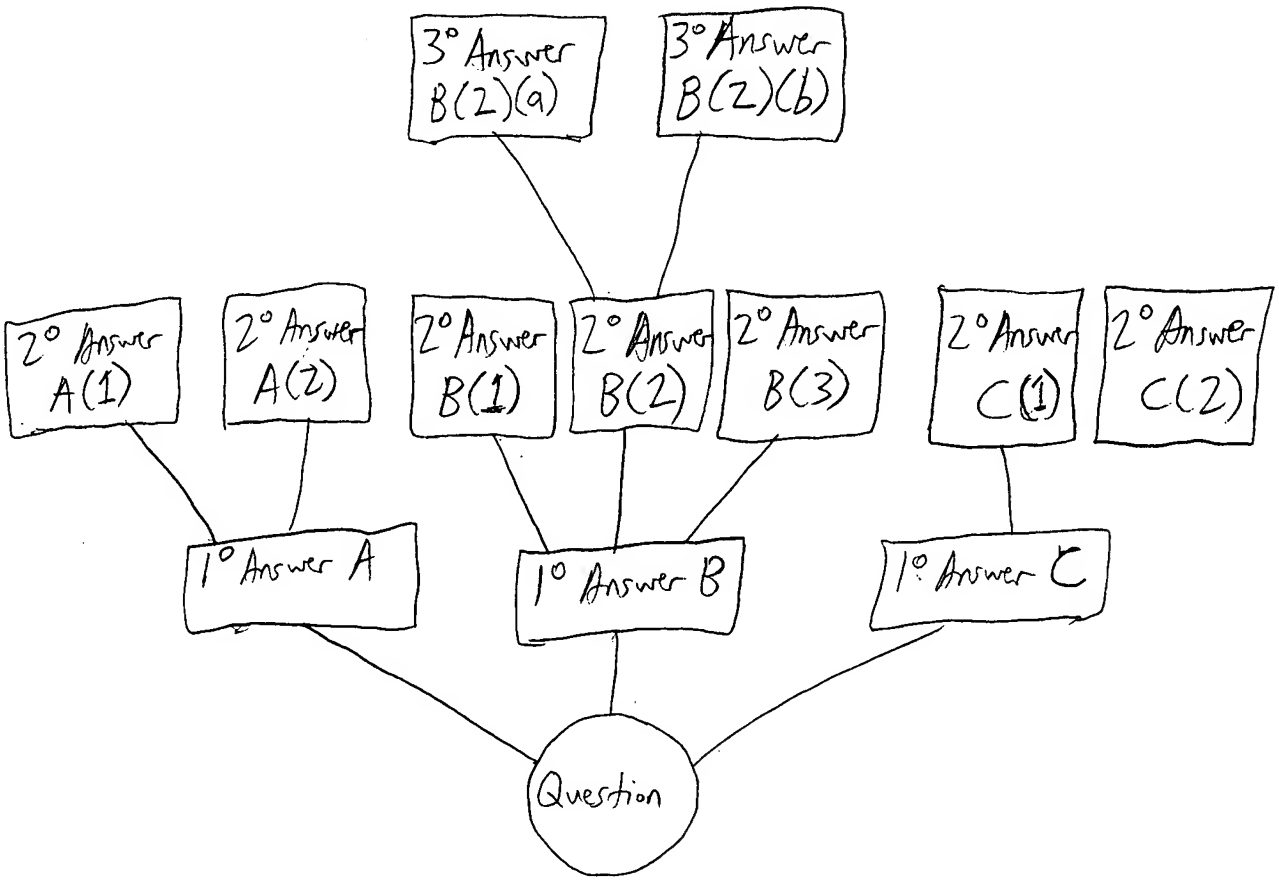
3° Answer B(2)(a)
3° Answer B(2)(b)
2° Answer A(1)
2° Answer A(2)
2° Answer B(1)
2° Answer B(2)
2° Answer B(3)
2° Answer C(1)
2° Answer C(2)
1° Answer A
1° Answer B
1° Answer C
Question

FIG. 8F

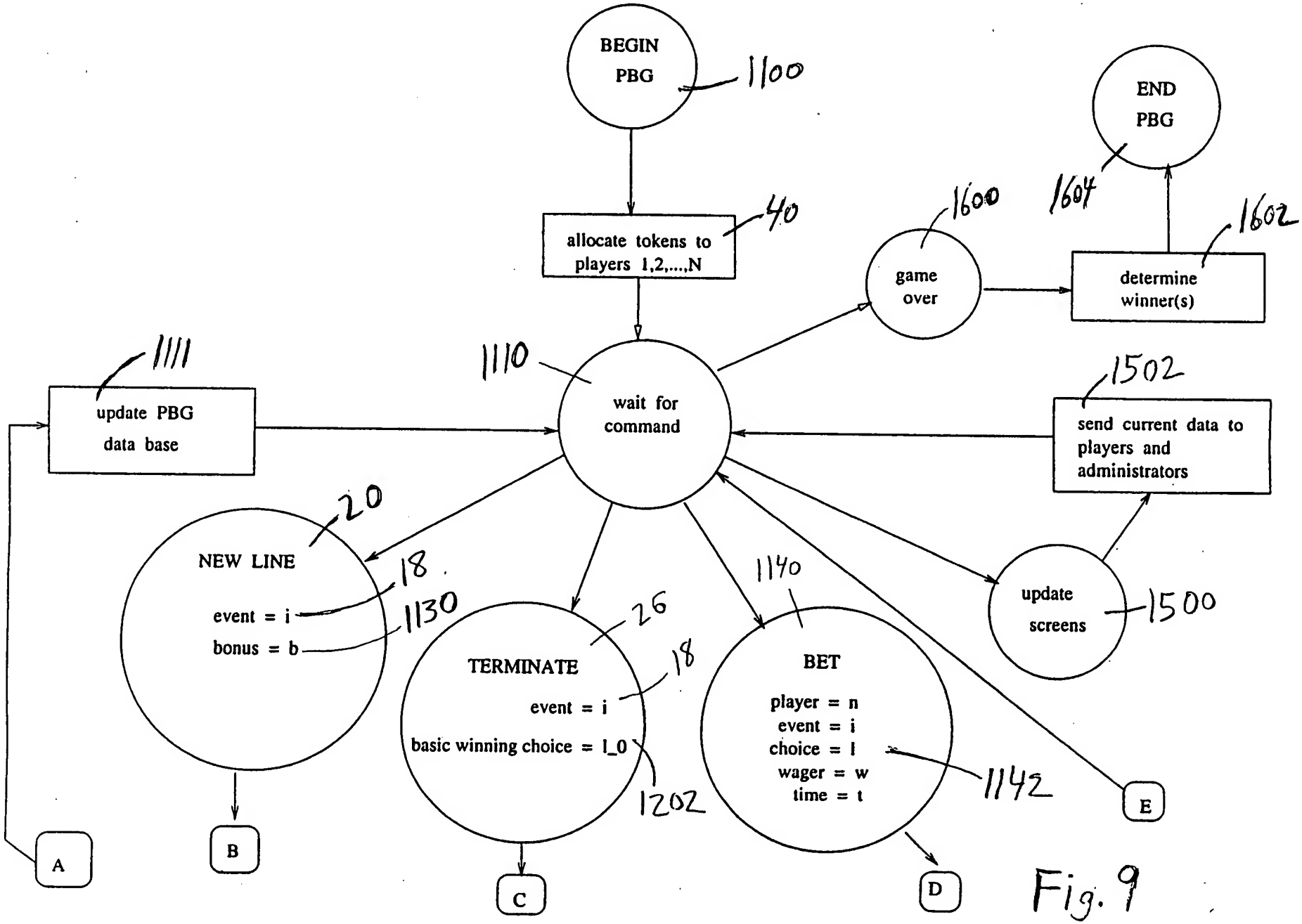
BEGIN PBG
1100
allocate tokens to players 1,2,...,N
40
update PBG data base
1111
wait for command
1110
NEW LINE
20
event = i
18
bonus = b
1130
TERMINATE
26
event = i
18
basic winning choice = l_0
1202
BET
1140
player = n
event = i
choice = l
wager = w
time = t
1142
game over
1600
END PBG
1604
determine winner(s)
1602
send current data to players and administrators
1502
update screens
1500
A
B
C
D
E

Fig. 9

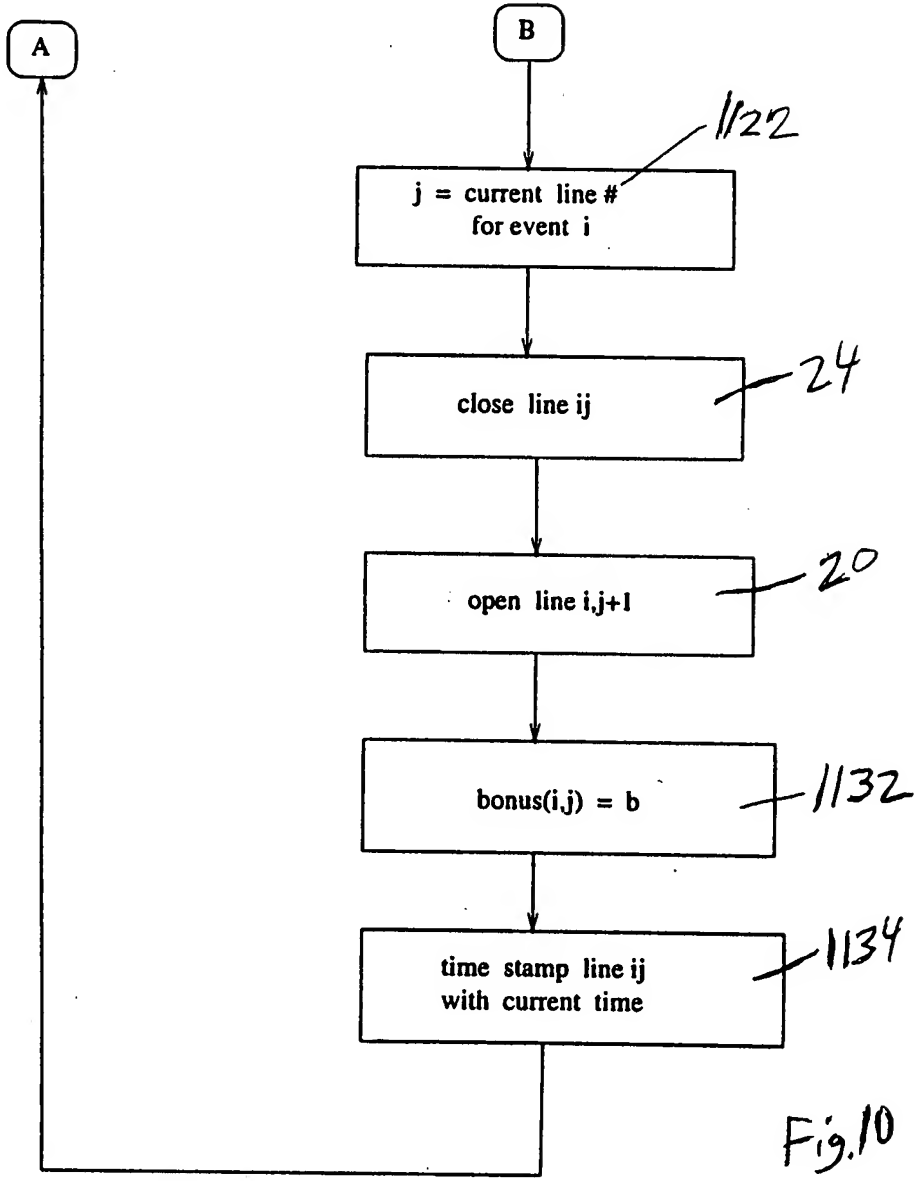
A
B
1122
j = current line #
for event i
close line ij
24
open line i,j+1
20
bonus(i,j) = b
1132
time stamp line ij
with current time
1134

Fig. 10

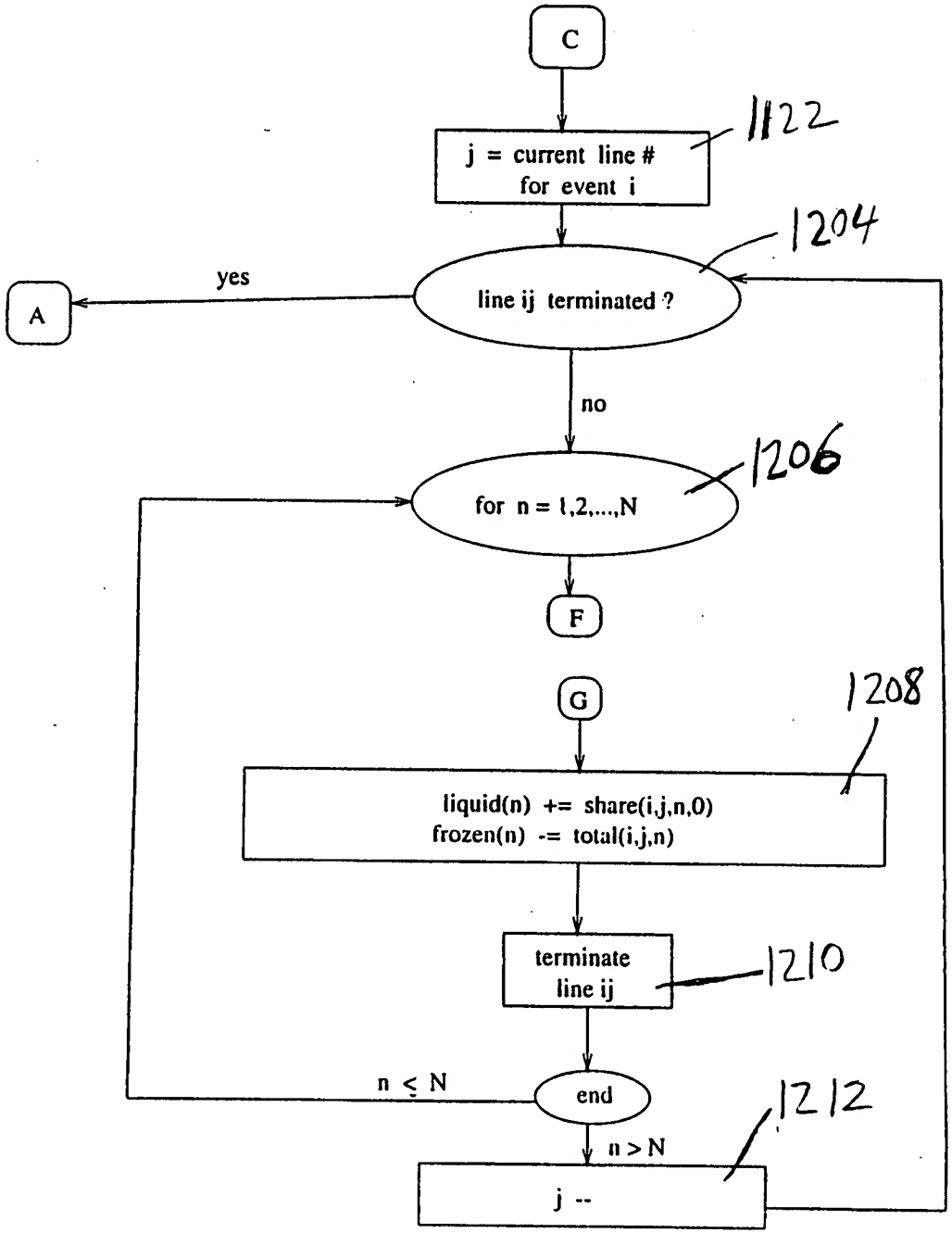
C
1122
j = current line #
for event i
1204
yes
A
line ij terminated ?
no
1206
for n = 1,2,...,N
F
G
1208
liquid(n) += share(i,j,n,0)
frozen(n) -= total(i,j,n)
terminate
line ij
1210
n ≤ N
end
1212
n > N
j --

Fig. 11

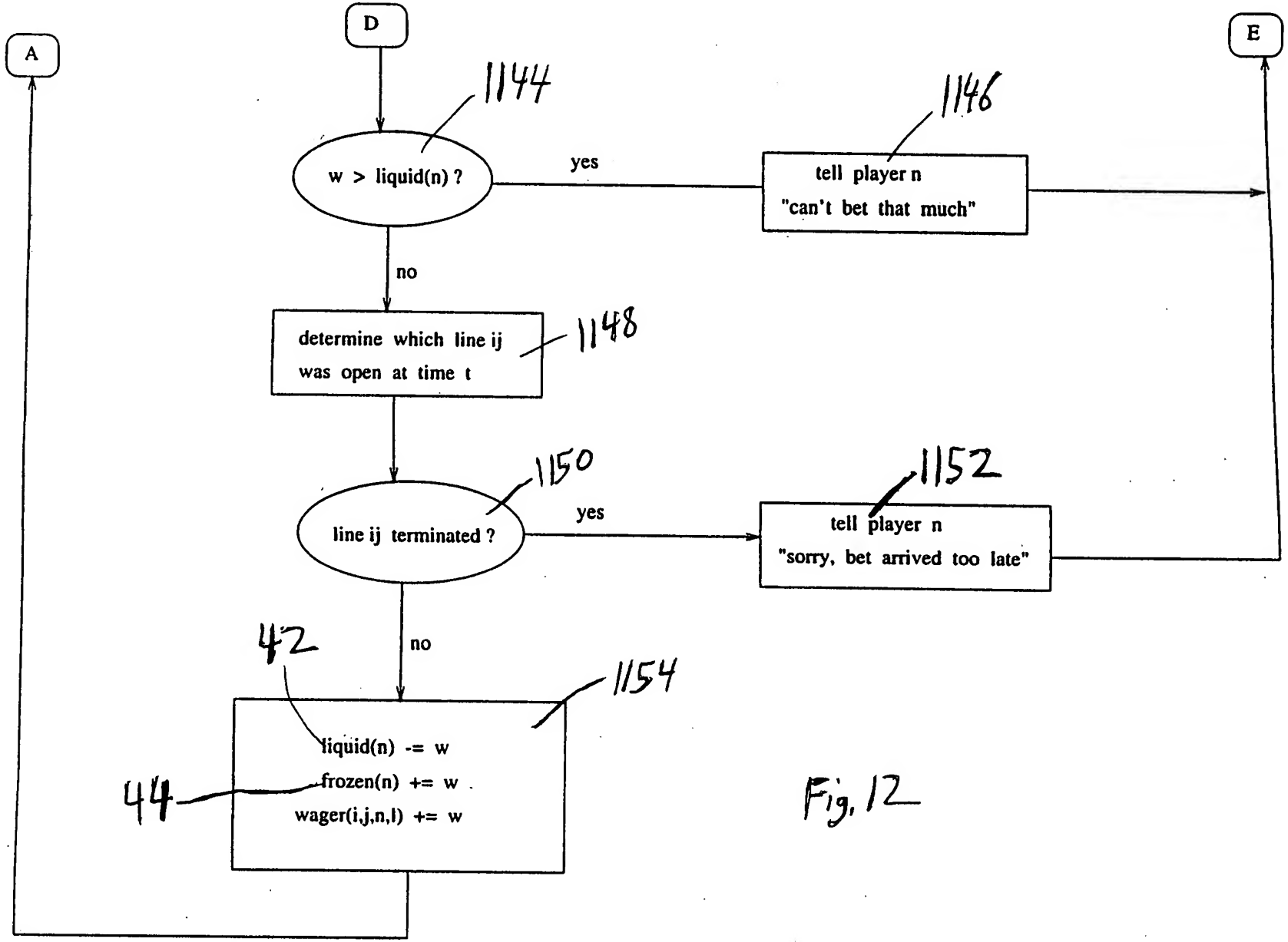
A
D
E
1144
w > liquid(n) ?
yes
1146
tell player n
"can't bet that much"
no
determine which line ij
was open at time t
1148
1150
line ij terminated ?
yes
1152
tell player n
"sorry, bet arrived too late"
no
42
1154
liquid(n) -= w
frozen(n) += w
wager(i,j,n,l) += w
44

Fig. 12

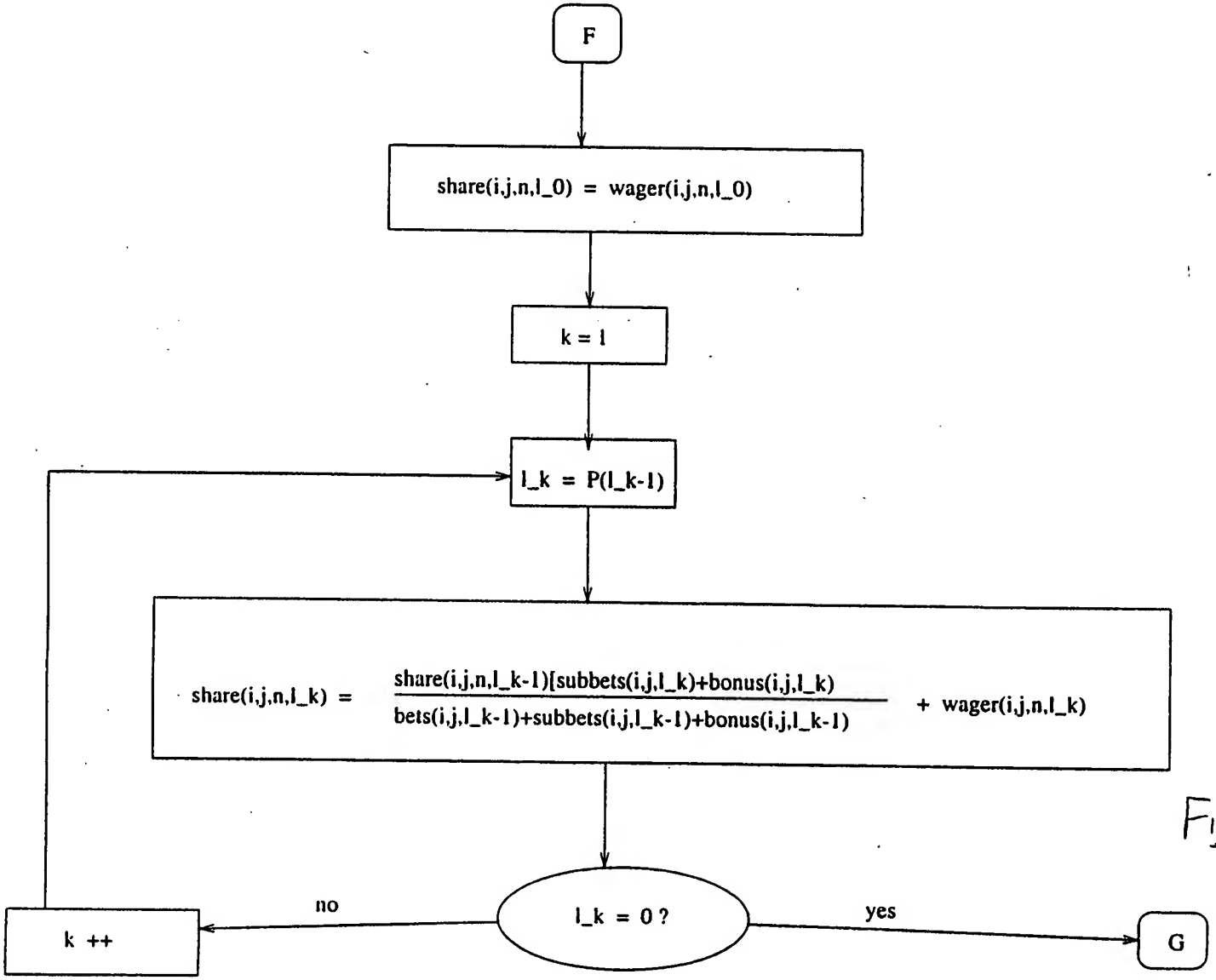
F
share(i,j,n,l_0) = wager(i,j,n,l_0)
k = 1
l_k = P(l_k-1)
share(i,j,n,l_k) = share(i,j,n,l_k-1)[subbets(i,j,l_k)+bonus(i,j,l_k) / bets(i,j,l_k-1)+subbets(i,j,l_k-1)+bonus(i,j,l_k-1)] + wager(i,j,n,l_k)
l_k = 0 ?
no
yes
k ++
G

Fig. 13